

# Cummeennabuddoge Wind Farm

Technical Note - Habitat Review

FuturEnergy Ireland

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Quality information

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# 1. Introduction

## 1.1 Background

AECOM was appointed by FuturEnergy Ireland Development Designated Activity Company ('FuturEnergy Ireland') to carry out a basic review and field check of the previously recorded habitats at the proposed Cummeennabuddoge Wind Farm, Co. Kerry, approximately 5 km north of Ballyvourney.

As per the appointment, the reviewed area (the 'Site') encompasses land within 250 m of proposed turbine locations and 100 m of proposed access tracks. It was noted that only a very narrow habitat buffer was recorded in the original survey along a) parts of the proposed access track to the east beyond the zone of the proposed turbines, and b) along the proposed cable connection to the west; however, a basic review of habitats within the 100 m was still noted during this review along these sections of the Site.

## 1.2 Summary description of the Site

The Site mainly lies within Coillte forestry plantation, dominated by Sitka spruce *Picea sitchensis* plantation but with various localised strips and patches of open habitats along watercourses, forest rides, etc. It is approximately orientated west to east, and there are existing wind farms close to the western part of the Site. The altitude range of the Site is approximately 250-500 m, with slopes ranging from flat to moderately steep. The local open habitat patches (excluding existing tracks) mainly comprise wet heath and degraded blanket bog, with smaller amounts of dry and wet grassland.

# 2. Methodology

## 2.1 Field survey

The survey for this basic review of previously-recorded habitats was carried out from vehicle and on foot on 20-21 March 2024 by an AECOM habitat specialist with extensive experience of upland and lowland habitats. The weather during the survey was dry or light drizzle and there were no significant hinderances to the survey.

Previously-mapped habitats were compared with the current habitats (in March 2024), and any differences noted. This Technical Note uses the Fossitt habitat system (Fossitt, 2000) as used during the original survey and commonly used throughout Ireland.

In addition to referring to the original habitat mapping, this survey also referred to recent aerial photography to aid identification and separation of vegetation patches. Field notes were recorded in ESRI FieldMaps on a GPS-enabled tablet pre-loaded with aerial photography, to maximise accuracy.

## 2.2 Nomenclature

This Technical Note gives the scientific name of vascular plants on first mention of a species, following Stace (2019), and thereafter common names only. English names of bryophytes and lichens are not well known therefore only scientific names have been used for these in all cases, following Blockeel *et al.* (2020).

## 2.3 Limitations

The boundaries between habitats in more natural situations can be gradual rather than sharp. In particular, wet heath and blanket bog commonly grade into each other, and the vegetation of sufficiently degraded blanket bog can be the same as wet heath, in which case classification as blanket bog arises from peat depth of 0.5 m or more. However, peat depth during the habitat survey could only be judged from locally-visible cut peat edges (e.g., in cutover bog or along existing track edges), which are not always present. It is therefore possible that some wet heath could be on deeper

peat than suspected, and should then be classed as degraded blanket bog. If known peat depths from a peat probing survey should indicate peat of 0.5 m or more in areas classed as wet heath (or, generally, any open habitat), then those areas of deeper peat should be regarded as degraded blanket bog. Conversely, if known peat depths from peat probing are less than 0.5 m in areas classed as blanket bog, then those areas of shallower peat should be regarded as wet heath, except where shallow peat patches sit within a wider area classed as cutover bog.

In the limited time available for this initial Site visit, where habitats within survey buffers (250 m for turbines and 100 m for access tracks) were judged to be uniform, the entirety of the relevant polygon was not necessarily walked over.

Access was not certain for the eastern end of the grid connection, which is on farmed land, and this section was only viewed from a distance.

### 3. Comparison of previous habitat mapping and current habitats

In this section, Fossitt habitat codes in **bold** are considered present. Any mention of Fossitt codes without bold font refer to habitats not now considered present, or mentioned for the purposes of discussion only.

Overall, there is little significant change in the habitats from the previously-mapped habitats. The largest changes are the alteration, following clear-felling, of several large areas of mature plantation to very young recently-planted conifers. However, this has no impact on habitat value, since both young and mature non-native conifer plantation is unnatural and of negligible floristic interest.

Some differences were noted for riparian vegetation alongside streams, including presence of some **PF2** poor fen/flush and, locally, degraded **PB2** upland blanket bog, however these differences are of little consequence given that they involve areas that are only very locally impacted by the proposed infrastructure.

The following sections review the habitats in each of the four habitat mapping sheets, from west to east, provided by the original habitat survey figure (drawing 61253/HB/054b entitled 'Figure 8-2 Habitats mapping', provided to AECOM by email by FuturEnergy).

#### 3.1 Sheet 1 – Western access

##### 3.1.1 Western half

The original habitat mapping provides little information for the western half of this sheet. However, the majority of adjacent habitat here is **WD3** mature conifer plantation, except near the western end where there is much **WS5** recently-felled conifer plantation. Within 100 m of the access route, but not close to it, there are some patches of rather poor **HH3** wet heath, dominated by purple moor-grass *Molinia caerulea* and heather *Calluna vulgaris*, and often with western gorse *Ulex gallii*. Aerial photography shows pale patches within the plantation close to the access route, but these are just poorly-grown conifer plantation (on ground that is evidently too wet and would be **HH3** wet heath without the trees).

At the extreme western end, the access route passes through a block of **WD1** semi-mature ash *Fraxinus excelsior* plantation, and beside the old road at the very start of the access route there is a thin band of **WN6** wet willow woodland (of grey willow *Salix cinerea* with mosaic wet and drier ground flora, and a few larger willows on a historic boundary).

A more substantial forest ride crossing the access track is poor quality **HH3** wet heath northwards, and southwards contains much pooled water with sphagnum. Within 100 m of the access track, but not close to it, there is a substantial **FL2** oligotrophic standing water, with peripheral **HH3** wet heath, **PF2** poor fen/flush (with soft rush *Juncus effusus* and sphagnum) and **GS4** species-poor purple moor-grass wet grassland.

A small patch of HD1 dense bracken noted in the previous habitat mapping is no longer present, having been destroyed by clear-felling operations.

### 3.1.2 Eastern half

The dominant habitats within 100 m are **WD3** mature conifer plantation (much as previously mapped) and **WD5** clear-fell (the zone of which is currently being enlarged). The proposed new access track section (not following existing tracks) still runs through **WD3** mature conifer plantation.

The previous habitat survey mapped strips of mixed wet heath/blanket bog and scrub beside the existing access track. The habitat review found that scrub dense enough to refer to **WS1** scrub (comprising grey willow and young conifers) is limited, and the open habitat strips are best classed as **HH3** wet heath on the east/north side of the track, and mainly as **PB2** upland blanket bog on the south side. The wet heath is disturbed in places, appears species-poor with purple moor-grass dominant, and often has scattered grey willow or young conifers. The blanket bog has a similar flora but less scrub and appears to be bog from the obvious deep peat often visible at the cut face next to the track. Much of the forestry west of the track here appears to be on former blanket bog. The open bog strip is undoubtedly adversely affected by the planted trees, track and drains – ideally it would be classed as degraded bog to highlight its lower value, but there is no option for this under the Fossitt system unless it is cutover bog.

## 3.2 Sheet 2 – Western part of proposed turbine layout

The majority of this area is still **WD3** mature conifer plantation (as previously mapped). The zone previously marked as WS5 clear-fell is now **WS2** very recent conifer plantation. There is also a small patch, unaffected by any infrastructure, of **WS2** recent broadleaved plantation. A ride within the recent plantation area appears to be **GS4** species-poor purple moor-grass, although some parts may be **HH3** wet heath; however, this strip is unaffected by any proposed infrastructure.

Between water crossings WX09 and WX02, there is a strip of stream-side vegetation which is beside or crossed by sections of existing or proposed access track. This was previously mapped as a mosaic of **HH3** wet heath, **GS4** wet grassland and **GS3** humid grassland in the downstream (northern) part, and a mosaic of **HH3/GS4** in the upstream (southern) part. This is still broadly correct, although some of the rushy vegetation is best classed as **PF2** poor fen/flush (because it is acidic with sphagnum and *Polytrichum commune*). Additionally, it would be possible to refine the habitat mapping – for example, for the stretch running parallel to the access track, the adjacent habitat is mainly **GS3** humid (moderately acid) grassland, and the **HH3** wet heath is confined to the opposite (east) side of the stream (and thus at no appreciable risk of impact). The **HH3** appears typical of the Site, apparently species-poor with dense and tussocky purple moor-grass.

North and south of water crossing WX03, there is another strip of riparian vegetation. The previously-mapped mosaic of **HH3/GS4/GS3** is again broadly correct, although the same points made in the previous paragraph apply. There are patches of **PF2** poor fen/flush closer to the stream, as well as small patches of **GS3** humid (acid) grassland (short-grazed and typically on the inside of meanders), and the **HH3** wet heath is found more on the valley slopes. However, to the south-west of proposed Turbine 9, the outer vegetation in this strip appears to be degraded **PB2** upland blanket bog, judging from a visible 'lip' of deeper peat. At the northern end of this strip of riparian vegetation, there is a large sloping zone of **HH3** wet heath (as previously mapped). Just north of proposed Turbine 3 there was previously mapped a small zone of ED2 spoil/bare ground, however this was not seen during this Site visit, and instead this area appears to be poorly-grown conifers on a wet heath flora.

There is a large zone of **PB4** cutover bog in this part of the Site, as previously mapped. It is not directly impacted by any infrastructure. Proposed Turbine 14 is immediately adjacent to it, within forestry. However, it may be possible to refine the habitat mapping following the proposed detailed survey at a later date – actual zones of removed peat appear localised to thin strips in the northern part of this bog zone, such that areas further from the cuttings might be classifiable as intact bog. That said, a cursory inspection of the bog surface away from the immediate vicinity of the cuttings suggested that it was quite species-poor and lacking in expected sphagnum species, and this may justify retaining this whole bog zone as **PB4** cutover bog.

### 3.3 Sheet 3 – Eastern part of proposed turbine layout

This zone remains especially dominated by conifer plantation with very little other habitat. Zones marked as WS5 clear-fell in the previous habitat mapping are all now **WS2** recent conifer plantation, there is a new zone of **WS2** recent conifer plantation just west of proposed Turbine 6 (where the existing access track has also been extended), and the majority of other plantation in this area is now also **WS2** recent conifer plantation. Retained mature **WD3** mature conifer plantation is now restricted mainly to areas between proposed Turbines 5 and 8, around proposed Turbines 3 and 4, and in the vicinity of water crossing WX08.

There is a new zone of **WS2** recent broadleaved plantation (of willow *Salix* sp.) shortly east of proposed Turbine 2.

There is an active borrow pit corresponding to **ED4** active quarries south-east of proposed Turbine 10, with adjacent disturbed partially-vegetated spoil **ED2/3** (as previously mapped). The previous habitat mapping included an adjacent patch of disturbed ground in mosaic with marshy vegetation, however this is now considered a mix of **GS4** wet grassland (soft rush with acid pleurocarpous mosses) and **PF2** poor fen (soft rush with *Polytrichum commune* and sphagnum); there is also a channel of water here with bog pondweed *Potamogeton polygonifolius*.

The stream crossed by water crossing WX08 has open vegetation on the adjacent slopes which was largely not mapped in the previous survey, but includes limited extents of both **HH3** wet heath and **HH1** dry heath. Approximately 450 m south-east of proposed Turbine 3, and also unmapped previously, there is a narrow riparian zone of open vegetation similar to that described above (with **GS3** humid (acid) grassland and **PF2** poor fen/flush), and adjacent to the existing track here there is a narrow strip of **HH3** wet heath and (on the very steep cutting) damp **HH1** dry heath.

### 3.4 Sheet 4 – Grid connection

Only a very narrow strip of habitat was previously mapped along much of the grid connection.

On the south side of the existing access track, as far east as the hairpin bend, habitat within 100 m is either **WS2** recent conifer plantation or (more locally) **WD3** mature conifer plantation. East, of the hairpin bend in the existing access track, the sloping hillside supports extensive **HH3** wet heath (including within the previously-mapped narrow strip), until reaching agricultural fields beside the substation.

On the north side of the existing access track, there is some initial **WD3** mature conifer plantation, and then a long stretch (divided by two new access tracks for the existing wind farm) of **PB4** cutover bog with obvious peat cuttings (in places down to bedrock). Following a rectangular block of **WS2** recent conifer plantation, there is then mainly **HH3** wet heath, although just to the east of the rectangular plantation there appears to be some further **PB4** cutover bog, judging from visible raised peat hags.

As noted in the limitations above, the agricultural field beside the substation that the grid connection finally passes through was not closely inspected owing to uncertainty over access, and was viewed only from a distance. However, whilst the previous survey mapped this as **GS2** dry meadow, it seems likely that it is now **GA1** improved agricultural grassland, given how very short-grazed and even the sward appears, with in places thinly scattered soft rush. Whether or not closer inspection later in the year confirms this, it certainly appears from the intensity of grazing that that this grassland is likely to be in poorer condition than it was during the original survey.

## 4. References

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